

Title (en)  
METHOD AND SETUP FOR THE AMPLIFICATION OF NUCLEIC ACIDS

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR AMPLIFIKATION VON NUCLEINSÄUREN

Title (fr)  
PROCÉDÉ ET DISPOSITIF D'AMPLIFICATION D'ACIDES NUCLÉIQUES

Publication  
**EP 3101143 A1 20161207 (EN)**

Application  
**EP 16179482 A 20130201**

Priority  
• DE 102012201475 A 20120201  
• EP 13704388 A 20130201  
• EP 2013052100 W 20130201

Abstract (en)  
Method for the amplification of nucleic acids. A method for the amplification of nucleic acids (1), in which nanoparticles (8) in a reaction volume (2) transfer heat to their environment through excitation.

IPC 8 full level  
**C12Q 1/6844** (2018.01)

CPC (source: CN EP RU US)  
**B01L 7/525** (2013.01 - US); **B01L 7/5255** (2013.01 - US); **B82Y 20/00** (2013.01 - US); **C12Q 1/6844** (2013.01 - CN EP RU US);  
**C12Q 1/686** (2013.01 - RU US); **B01L 2300/1872** (2013.01 - US)

Citation (applicant)  
• US 4683202 A 19870728 - MULLIS KARY B [US]  
• WO 2007143034 A1 20071213 - UNIV UTAH RES FOUND [US], et al  
• US 2002061588 A1 20020523 - JACOBSON JOSEPH M [US], et al  
• US 2003143604 A1 20030731 - STORHOFF JAMES J [US], et al  
• EP 2162549 A1 20100317 - UNIV MUENCHEN L MAXIMILIANS [DE]  
• D. RENNEBERG; C. J. LEUMANN: "Watson-Crick base-pairing properties of Tricyclo-DNA", J. AM. CHEM. SOC., vol. 124, 2002, pages 5993 - 6002  
• SILVIA ALBALADEJO ET AL., NANO LETTERS, vol. 9, 2009, pages 3527 - 3531  
• ARTHUR ASHKIN ET AL., PROC. NATL. ACAD. SCI., vol. 94, no. 10, 1997, pages 4853 - 4860  
• J. HURST ET AL., ANAL. CHEM., vol. 78, no. 24, 2006, pages 8313 - 8318

Citation (search report)  
• [I] US 2002061588 A1 20020523 - JACOBSON JOSEPH M [US], et al  
• [I] EP 1840222 A1 20071003 - SUZHOU YANGZE DELTA ACADEMY OF [CN]  
• [I] WO 2009115335 A1 20090924 - FRAUNHOFER GES FORSCHUNG [DE], et al  
• [X] WO 2007143034 A1 20071213 - UNIV UTAH RES FOUND [US], et al  
• [A] WO 0248399 A2 20020620 - INST PHYSIKALISCHE HOCHTECH EV [DE], et al  
• [AP] EP 2481817 A1 20120801 - GNA BIOSOLUTIONS GMBH [DE]  
• [I] LI MIN ET AL: "Enhancing the efficiency of a PCR using gold nanoparticles", NUCLEIC ACIDS RESEARCH, OXFORD UNIVERSITY PRESS, SURREY, GB, vol. 33, no. 21, 27 November 2005 (2005-11-27), pages E - 1841, XP008090941, ISSN: 0305-1048  
• [I] JOACHIM STEHR ET AL: "Gold NanoStoves for Microsecond DNA Melting Analysis", NANO LETTERS, vol. 8, no. 2, 1 February 2008 (2008-02-01), pages 619 - 623, XP055206774, ISSN: 1530-6984, DOI: 10.1021/nl073028i

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**DE 102012201475 A1 20130801; DE 102012201475 B4 20141218;** AU 2013214098 A1 20140724; AU 2013214098 B2 20160512;  
BR 112014018737 A2 20170704; CA 2862912 A1 20130808; CA 2862912 C 20170228; CN 104093860 A 20141008;  
CN 107604052 A 20180119; DK 2809806 T3 20161010; EP 2809806 A1 20141210; EP 2809806 B1 20160810; EP 3101143 A1 20161207;  
EP 3101143 B1 20180801; ES 2596452 T3 20170109; HU E030691 T2 20170529; JP 2015511124 A 20150416; JP 2016127842 A 20160714;  
JP 6475645 B2 20190227; PL 2809806 T3 20170228; RU 2014135391 A 20160327; RU 2603253 C2 20161127; US 2014377764 A1 20141225;  
US 2016281139 A1 20160929; US 9382583 B2 20160705; US 9926594 B2 20180327; WO 2013113910 A1 20130808

DOCDB simple family (application)  
**DE 102012201475 A 20120201;** AU 2013214098 A 20130201; BR 112014018737 A 20130201; CA 2862912 A 20130201;  
CN 201380007616 A 20130201; CN 201710868078 A 20130201; DK 13704388 T 20130201; EP 13704388 A 20130201;  
EP 16179482 A 20130201; EP 2013052100 W 20130201; ES 13704388 T 20130201; HU E13704388 A 20130201; JP 2014555234 A 20130201;  
JP 2016011619 A 20160125; PL 13704388 T 20130201; RU 2014135391 A 20130201; US 201314375946 A 20130201;  
US 201615175237 A 20160607